TELESCOPE

VOL. 7 NO. 8 AUGUST 1958

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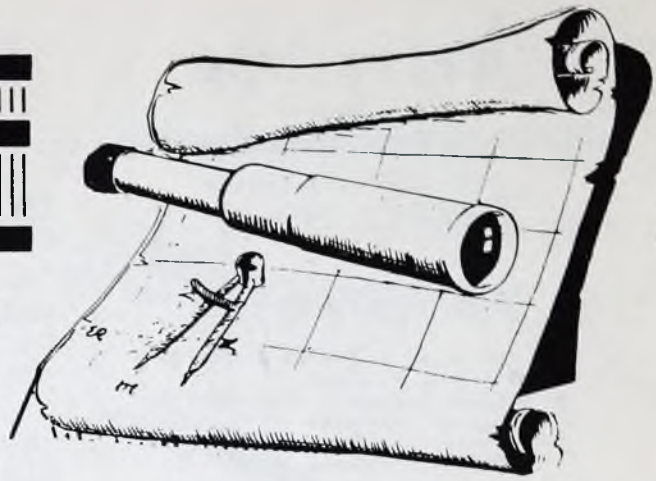

Telescope

PUBLISHED BY

GREAT LAKES MODEL SHIPBUILDERS' GUILD

5401 Woodward Avenue

Detroit 2, Michigan

THE GUILD

Organized in 1952 to locate, acquire, and preserve information and objects related to the history of shipping on the Great Lakes and to make same available to the public through the Museum of Great Lakes History and the columns of Telescope. The construction of authentic scale models of Great Lakes ships is one of the prime objectives of the organization, which has brought into being the largest existing collection of models of these ships. The Museum of Great Lakes History, located at 5401 Woodward Avenue, Detroit 2, Michigan, is official headquarters for the organization and repository of all of its holdings. The Guild is incorporated as an organization for no profit under the laws of the State of Michigan. No member receives any compensation for his services. Donations to the Guild are Deductible for tax income purposes.

Supported in part by
THE
DETROIT HISTORICAL
SOCIETY

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Joseph E.Johnston,
Editor

Editorial

PROFITING BY OUR ERRORS.

In our July issue we began publishing a list of Great Lakes marine losses and got brought up "all standing", to use an old sea term. There was considerable doubt in the editor's mind as to the accuracy of the information it contained but now there is none.

Captain Frank Hamilton, of Kelly's Island was good enough to send in some corrections to that first page. Mr. Erik Heyl, of Buffalo was even better. He sent in another list which he has compiled over the years, and with his reputation for careful research there should be no further cause for criticism. However, Mr. Heyl requests other members to supply what ever they can in the way of information to fill any gaps which may appear in his list.

So now you may draw a big "X" across page 10, in your July TELESCOPE and write "See August number". And this may be the right time to restate our policy regarding situations of this kind.

TELESCOPE is a publication sponsored by the Guild which is made up of students of Great Lakes history as well as persons who are recognized authorities on the subject. The magazine serves both. We are widely scattered so have no opportunities to get together and exchange information over the table unless we live close to headquarters in Detroit. Those who are able to attend our monthly meetings have all profited by doing so. TELESCOPE should be an extension of these meetings and every member should feel free to use it as a question and answer medium.

What we are seeking is the facts, all the facts, and nothing but the facts. Obviously not one of us have them all. Questions and answers to questions are always welcomed by the editor. We should all be free with both. As is shown by the incomplete, and inaccurate, list mentioned above, and the constructive criticism offered by Captain Hamilton and Mr. Heyl TELESCOPE can be a means of increasing and improving our own knowledge and that of our associates. Nothing is to be gained by hiding our respective lights under the proverbial bushels. Let's work more in the cooperative spirit. TELESCOPE can only be as good as the members make it. For the first time in history we have a publication devoted to ALL phases of Lakes history, technical as well as general. Help keep it going.

MUSEUM NOTES

The Hydrofoil

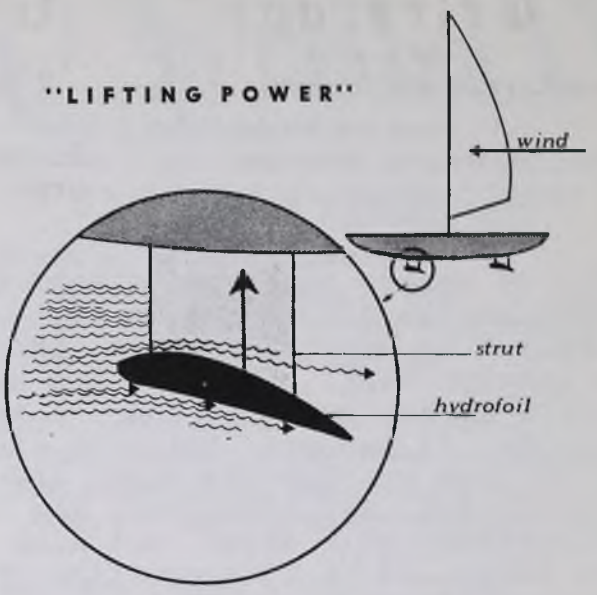
Our cover for this month shows the hydrofoil sailboat "Skid" underway on the St. Clair River near Algonac, Michigan. This strange-looking craft was perfected by Professor Arthur A. Locke who recently retired from the Department of Aeronautical Engineering, Wayne State University, after a long series of experiments with models. The final model, from which the "Skid" was copied has been presented to the Dossin Great Lakes Museum and is now on exhibit there.

The test run that proved the theory upon which the project is based was made on September 7, 1954, when the cover picture was taken. Sailing the boat at the time were Mrs. Locke and Yashitaka Yoshida, a Wayne student interested in the work being done. The latter, in an affidavit, dated September 12, 1954, makes the following statement:

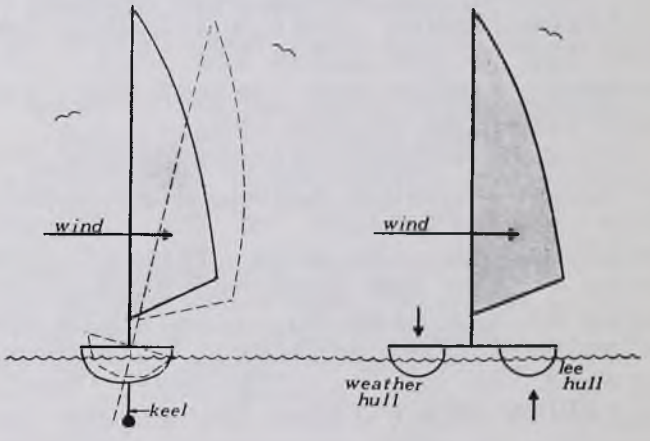
"Sailing between 12:30 p.m. and 2:30 p.m., when on one particular port tack and heading about 310 degrees near the Middle Channel light, wind speed 12-15 MPH the bottom of the port hull lifted about two feet completely out of the water at a heeling angle of about 10 degrees; sheets were eased, the hull then leveled off with the bottom of the port hull about six inches clear of the water, both of the hulls being level fore and aft and athwartships in respect to each other; the skipper and crew were both in the port hull; the vessel continued to sail in this attitude for about half a minute, until in the lee of Dickerson's Island.

The total time on the foils, including the first "hike" is estimated at about one minute and the distance 600 to 700 feet; there was no pitching or rolling...."

Motor-propelled hydrofoils have interested designers since about the end of the past century, and numerous successful boats have been built but the "Skid" was the first to lift its hulls above the surface of the water by wind power. Her success was widely publicized at the time and the Magazine Motor Boating of June, 1955, carried a two-page story on the event.



The way the hydrofoil gets the "lifting power" that enables it to raise the boat above the water surface is illustrated above. As the boat's hull is driven forward by wind power, the push of the water on the inclined hydrofoil exerts a force tending to lift the hull.



The above sketches illustrate how Professor Locke achieved stability in his craft—an element of prime importance in applying the hydrofoil principle. In the case of the single-hulled craft (at left) the keel, which is mandatory to prevent overturning, does not become effective until the boat has already begun to heel or lean. In the case of the twin-hulled craft, buoyancy of the lee hull and weight of the weather hull are immediately and continuously in action as stabilizers.

MEETINGS.

August 28th, 7-30 P.M. at the Detroit Historical Museum.

September and later meetings, during school months will be held on the last Friday.

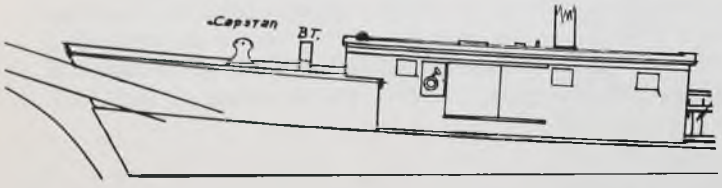
Models of Great Lakes Vessels

THE QUARTER DECK RAIL

Few of us are equipped to make the turned wooden stanchions we would be delighted to have in the rail around the quarter deck. Even if you have a small lathe, you will need a very good jig if you are going to have all of them exactly the same, and if they are not all identical, the imperfections will stick out like a sore thumb. It is my suggestion that you purchase brass stanchions and be happy they are available.

Just the installation of the rail is a major challenge. Each stanchion should lean inboard at the same angle as the ship's side immediately below it. Across the stern they should be inclined inward just a little. Let your eye be the guide for this. Try several angles and select the one most pleasing to the eye.

The same method is recommended for getting the cabin sides just right. Note the afterside of the forward deckhouse in the side view of the deck. This has been drawn at right angle to the deck to illustrate the point mentioned earlier. The house appears to be falling over. Small angles to short lines are almost impossible to show correctly, so it is up to the model builder to work out what is most pleasing. In such things the craftsman shows his real skill.



In Figure 7, we show how the water line is drawn in on the hull. This drawing shows the forecastle and poop, or quarter decks in place and the bulwarks installed. Don't forget to give both the proper camber before laying on the deck planking. The sides of each should be a continuation of the bulwarks, so deduct what is needed to allow for this.

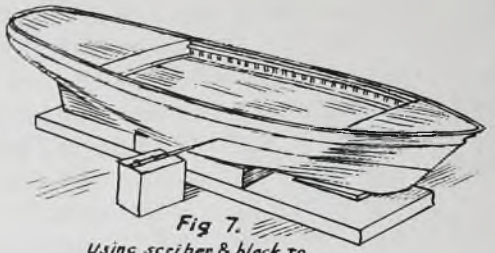
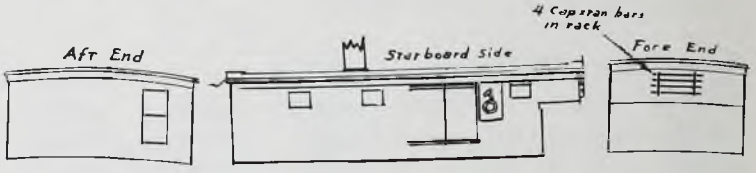


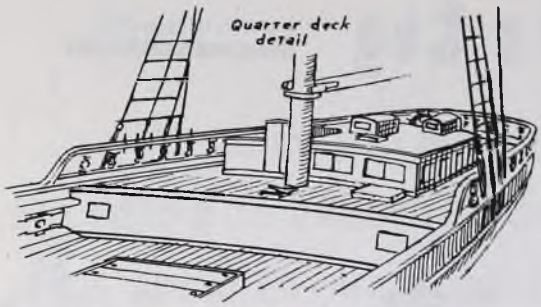
Fig 7.
Using scriber & block to mark water line

The following sketches show all sides of the deckhouses and details of such deck equipment as the wheel and deck cavels of the type which are bolted to the timber heads with mooring chocks piercing them and the bulwarks. Such cavels were popular on lumber carriers because they did not take deck space as would double bitts.



It will be noted that the forward deckhouse extends into the forecastle deck, in this model, but in actual construction it may be made to lap over the top, giving the same appearance. The after cabin need be built from the quarter deck up. Both should be decked with narrow planks which should be less width than the ones used in the main deck.

I prefer building my deckhouses rather than just cutting them out of solid blocks which will show end grain and be difficult to finish. It is better to use, for the sides, $\frac{1}{4}$" stock, reinforcing it if necessary to obtain strength. Lay on false tops of 1/8" stock, then put the final



decking on over this. Run covering boards around all edges of tops of deckhouses. If you build up your deckhouses, I suggest that they be given at least two coats of orange shellac both inside and out, but not on those surfaces which are to be glued. Mitre the covering boards at each corner so no end grain will be visible. If the false cabin tops are made slightly larger than the cabin sides, they can double as the wide molding.

All cabin windows are made to drop into slots when open, and have sliding shutters to protect them from heavy seas coming aboard. Never use painted on or glued on windows. They always spoil the effect and indicate slovenly craftsmanship.

HATCH COAMINGS

Always notch in the sides and ends of the timbers forming the hatch coamings, cutting away half of each. Run a rabbet into the inside top edge of each to receive the boards which form the hatch covers. In opposite corners of each hatch board provide a means of getting hold of them when covering and uncovering. These are mighty small details, but they always set off the job. You may think you are going to take a short cut by covering your hatches with canvas, but by the time you finish making and installing clips and battens for holding this down in proper shape you will see your error, and will not have as attractive a job.

To be continued.

FROM WAY BACK YONDER

J.E.Johnston.

When you think of "Way back yonder,"
With a self-approving air
For the light and truth you've garnered
Since the time you wandered there;

Don't be too enamoured with
The man you've come to be,
'Till you've taken stock, completely,
And seen what you can see.

For I want to tell you, brother,
That you're further from the truth
Than you were in "Way back yonder"
When you were a callow youth.

You have caught a lot of fishes,
With a lot of fancy gear
But they've come to be more tasteless
With every passing year;

And the stream is now polluted
With a lot of harmful stuff
That you had never dreamed of
When you swam there in the buff.

Sure! You've learned a lot of rubbish,
But unless it brought you joy
You're just sophisticated
And no wiser than the boy

Who fished along the river bank,
Or swam there when 'Twas hot:
You've lost a world of wonders
In the search for what you've got.

WINKY the ship's cat says:

"Lean cat catches the most rats".

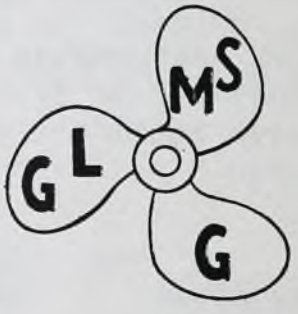
Ship Modelers Log

by John Leonetti

CAPT. J.E.JOHNSTON
TRES. SEC.
G.L.M.S.G.

MR. E. GULASH
STAR HOBBIES
DEARBORN, MICH.

MR. JOHN LEONETTI
MEMBER OF BD. OF DIRECT.
WARREN, MICH.

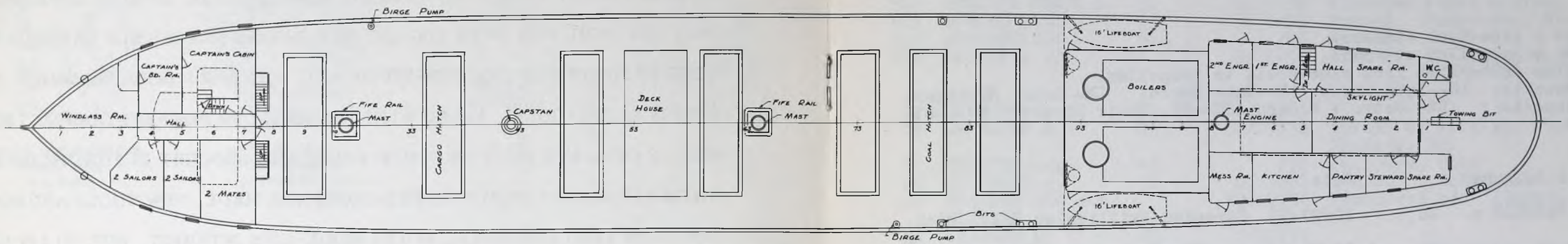


MR. WILLIAM HOEY
MEMBER OF BD. OF DIRECT.
FERNDALE, MICH.

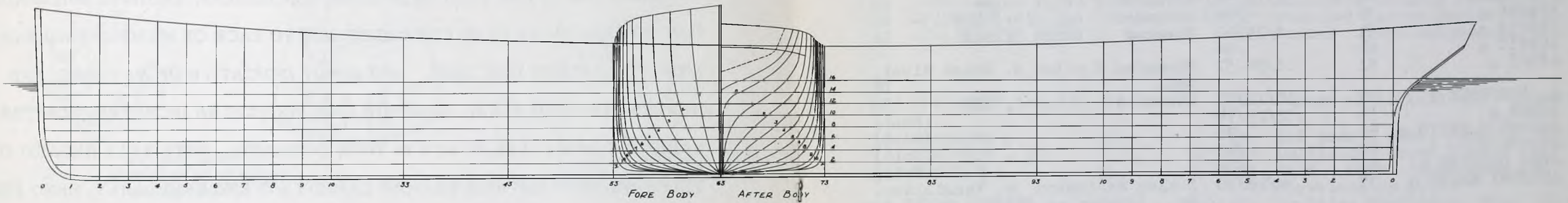
THIS MONTH WE WOULD LIKE TO DEVIATE FROM OUR REGULAR SHIP MODELER'S LOG ON MODEL CONSTRUCTION TO PRESENT ILLUSTRATED DESIGNS FOR LAPEL PINS AS SUBMITTED BY MEMBERS AT THE JUNE MEETING OF THE GREAT LAKES MODEL SHIPBUILDERS GUILD. THESE DESIGNS ARE THE RESULTS OF A DISCUSSION HELD TO ENCOURAGE NEW MEMBERS AND STIMULATE THE OLDER MEMBERS INTO ACTIVE PARTICIPATION.

THE NEED FOR GREATER RECOGNITION TO INCREASE MEMBERSHIP ROLLS AND TO PROMOTE MONTHLY MEETING ATTENDANCE, HAS BECOME MORE APPARENT WITH EACH REGULAR SESSION HELD. IT ALSO APPEARS THAT THE SAME FEW OFFICERS AND MEN HAVING PREVIOUSLY EXTENDED THEIR EFFORTS FOR THE BENEFIT OF ALL, ARE STILL DOING SO WHILE OTHERS REMAIN IDLE. ALONG WITH THE REGULAR BUSINESS TRANSACTIONS, MODELS OF LAKES SHIPS OR OTHER TYPES ARE BROUGHT IN FOR DISCUSSIONS, COLOR SLIDES AND FILM PRESENTATIONS ARE MADE, NEW TOOLS AND EQUIPMENT ARE ALSO PRESENTED IN THE MODELER'S INTEREST, BUT TO LITTLE OR NO AVAIL. ALTHOUGH MEMBERSHIP ROLLS SHOW AN INCREASE, ENTERTAINMENT PROGRAMS SUCH AS DINNERS, EXCURSIONS, EXHIBITS AND ANNUAL CONVENTIONS HAVE BEEN CURTAILED DUE TO LACK OF MEMBER PARTICIPATION AT REGULAR MEETINGS. THIS IS NOT INDICATIVE OF A STRONG AND HEALTHY ORGANIZATION, NOR DOES THIS PROVIDE AN INCENTIVE FOR THE VARIOUS COMMITTEES TO ACT IN YOUR INTERESTS. WITH FULL REGARD TO THOSE WHO FOR OBVIOUS REASONS CANNOT ATTEND REGULARLY, SEND YOUR COMMENTS, IDEAS, ETC. IN BY MAIL.

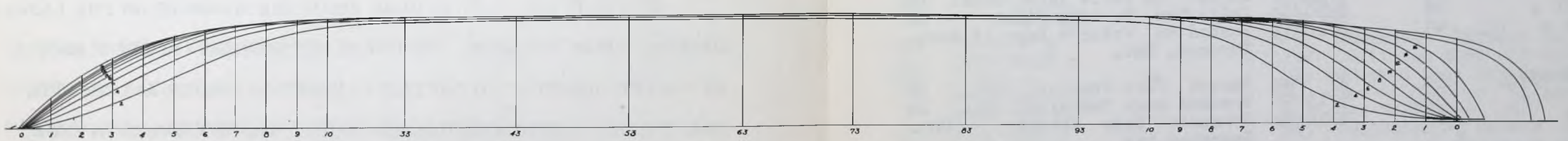
IN ANY EVENT, LET US HEAR FROM THE MEMBERS ON THE LAPEL PIN DESIGNS, LIKES, DISLIKES, AND OTHER SUBMISSIONS. LETTERS SHOULD BE MAILED DIRECTLY TO CAPTAIN J. JOHNSTON AND/OR J. LEONETTI, GREAT LAKES MODEL SHIPBUILDERS GUILD, 5401 WOODWARD AVENUE, DETROIT 2, MICHIGAN. ONCE A SUITABLE DESIGN IS ACCEPTED, STEPS WILL BE TAKEN TO MAKE LAPEL PINS AVAILABLE TO ALL MEMBERS.



MAIN DECK PLAN



FORE BODY AFTER BODY



SHEER PLAN

SHEET No. 1 OF 2 SHEETS

SCALE 1/16 FEET

STR. MASSACHUSETTS
BUILT 1882 BY DETROIT DRY DOCK CO.
GREAT LAKES MODEL SHIPBUILDERS' GUILD
5401 WOODWARD AVENUE
DETROIT 2, MICHIGAN

DRWN BY James B. Jones	CHK'D BY J.B. Jackson Lord
TRC'D BY James B. Jones	DATE 4-15-56

ALPHABETICAL LIST OF LOSSES ON THE GREAT LAKES

OF STEAMERS BUILT BEFORE 1868

Compiled by Erik Heyl.

(Steamers or Propellers of 100 tons or less NOT included)

Each letter is numbered serially, starting with 1 and preceded by the letter.

o indicates a sidewheel steamer.
x indicates a propeller steamer.
o-x indicates conversion from sidewheels to propeller.
LO--Lake Ontario; LE--Lake Erie; LH--Lake Huron; LM--Lake Michigan; LS--Lake Superior; DR--Detroit River; SC--St. Clair River; SCL--St. Clair Lake.

	Name & Year Launched		Date		
A1	A. D. PATCHIN o	46	10/27/53	Stranded Skilligalee Isl. Mich.	LM
A2	ACME x	56	11/ 4/67	Foundered Dunkirk, NY.	LE
A3	ALABAMA o	49	8/28/54	Foundered Buffalo, NY.	LE
A4	ALBANY o	46	11/29/53	Stranded Presq' Isle Harbor	LH
A5	ALLEGHENY x	55	10/24/97	Burned	
A6	AMERICA o	47	1/12/54	Stranded Point Pelee	LE
A7	ARAXES x	56	/94	Stranded Bay City, Mich.	LH
A8	ARCTIC o	51	5/29/60	Wrecked Huron Island	LS
A10	ARCTIC x	64	/94		
A11	ATLAS o	51	10/24/51	Stranded 8 miles W. Grand River, Ont.	LE
A12	A. ROSSETER x	47	10/11/55	Stranded Calumet, Ill.	LM
A13	AKRON x	59	2/23/74		(NoLL)
A14	ALFRED H.SMITH x	66	/90		(NoLL)
A15	ALPENA o	67	/80		(NoLL)
A16	ANNA DOBBINS x	62	/86		(NoLL)
A17	ANTHONY WAYNE o	37	4/28/50	Boiler Explosion W. Vermillion. LE (Listed as GENERAL WAYNE in Early American Steamers)	
A18	ANTHONY WAYNE o	49			
A19	ARIEL o	54	3/31/68	Burned Belle Isle, Mich.	DR
A20	ATLANTIC o	48	8/20/52	Collision W. Long Point	LE
A21	ADMIRAL o (C)	43	6/10/53	Burned to Water's Edge at dock. Toronto, Ont.	
B1	B. F. BRUCE x	52	8/ /62	Burned Port Stanley, Ont.	LE
B2	BALTIMORE o	47	9/18/55	Wrecked near Sheboygan, Wis.	LM
B3	BELLE x	50	5/16/52	Stranded Cape Crocker, Ont. Georgian Bay	
B4	BENJAMIN FRANKLIN o	42	10/ 9/50	Stranded Thunder Bay, Mich.	LH
B5	BOSTON x	47	8/29/54	Collision 15 miles E. Oak Orchard NY.	LO
B6	BRUNSWICK x	53	8/ 7/56	Foundered South Manitou Isl.	LM
B7	BUCEPHALUS x	52	11/12/54	Foundered Saginaw Bay, Mich.	LH
B8	BUCKEYE x	56	/85		(NoLL)
B8	BURLINGTON x	57	/95		(LL)

	Name & Year Launched		Date	
B9	B. B. JONES x	64	5/25/71	Exploded Port Huron, Mich. LH
B10	B. F. BRUCE x	52	8/ /62	Burned Port Stanley, Ont. LE
B11	BADGER STATE x	62	12/ 6/ 9	Burned Marine City Mich.
B12	BAY CITY x	67	/93	(NoLL)
B13	BOSCOBEL x	67	9/ 3/69	Burned below St. Clair, Mich. SCR
B14	BROOKLYN x	66	10/22/74	Exploded Detroit River
B15	BUCKEYE STATE o	51	6/ 9/55	Stranded Point Albino, Ont. LE
B16	BUNKER HILL o	37	9/ 2/51	Burned Tonawanda, NY. NR
B17	BOWMANVILLE o	56	/66	Wrecked (C)
B18	BALTIC o (C)		9/ 5/95	Burned Collingwood, Ont. a FRANCES SMITH
C1	CANESTEO x	62	1/22/81	
C2	CAROLINE o	22	12/27/38	Burned by British. Ft.Schlosser, Niagara, NY.
C3	CHARTER o-x	49	/56	Fairport, Ohio LE
C4	CATARACT x	52	6/16/61	Burned Erie, Pa. LE
C5	CHARTER OAK o-x		10/27/55	Foundered off Girard, Pa.
	CITY OF:			
C6	-BOSTON x	63	7/30/74	
C7	-BUFFALO o-x	57	7/30/66	Burned Buffalo, NY. LE
C8	-DETROIT x	66	9/ 3/73	Foundered Dunkirk, NY. LE
C9	-MADISON x	57	9/30/77	
C10	-PORT HURON x	67	9/ 9/76	Dunkirk, NY. LE
C11	-OSWEGO x	52	7/12/52	Collision Chagrin River, Ohio LE
C12	-SUPERIOR x	57	11/11/57	Stranded Cooper Harbor, Mich. LS
C13	-TORONTO 11 (C)	64	/82	Burned Port Dalhousie, Ont. LO
C14				
C15				
C16				
C17	CLEVELAND o	37	/54	Burned while laid up. Tonawanda NY. LE
C18	COLUMBUS o	35		Hit pier & sank. Dunkirk, NY. LE
C19	COMMERCE o (C)		5/ 7/50	Collision Grand River, Ont. LE
C20	CASPIAN o	51	7/ 1/52	Sunk Torn from moorings at Cleveland in gale.
C21	CHALLENGE x	53	6/22/53	Exploded Cheboygan, Mich. 20 mi. below Mackinaw LM
C22	CHARLES MEARS x	56	8/ 7/64	Burned Muskegon, Mich. LM
C23	COLORADO x a DETROIT	67	/98	(NoLL)
C24	CONGRESS x	61	10/26/67	Stranded Thunder Bay, Mich.
C25	CHESAPEAKE o		6/16/47	Collision sunk off Conneaut, O.
C26	CANADA o	26	/36	Wrecked near Oswego, NY. LO
	COLLINGWOOD o			See KALOOLAH o K1
	COMET o (C)	49		See MAYFLOWER M26
C27	CORA LINN o a NOVELTY o	52	/60	Collision at Coteau du Lac. LO

To be continued.

PORTS OF THE GREAT LAKES
Part I
LAKE MICHIGAN

For some time we have been asking for brief histories of Great Lakes ports, both active and abandoned. Up to this time very little is on hand in our files which is suitable to our needs. The following has been taken from Beers History of the Great Lakes and is presented in the hope that some of our members will take up where it leaves off.

There are many interesting and even thrilling stories to be found in the records of early efforts by the pioneers to develope the many little shallow entrances into useable harbors for the vessels of the times. In this part of our series we are listing only Lake Michigan ports. Further information of any kind will be welcome and all will be collected and held until enough is on hand to make a complete and well-documented history on each port. In all cases please include a list of your sources. No port is too small to be included in this,or too inactive. The old abandoned ports are often very interesting.

Ahnapee, Wis.

First permanent settlement, 1851.
First peir built, 1856.
First steamer to call, same year, the "Cleveland".
First federal appropriation for port work 1872.
Wolf River, with 4 feet of water was developed.

Charlevoix, Michigan.

No information at hand.

Chicago, Illinois.

Located at the mouth of the Chicago River.
1674 Father Marquette portaged from here to the Illinois River.
At some time during the 18th Century a trading post was located here.
1803 Fort Dearborn established by Americans.
1812 The Fort Dearborn massacre.
1830 Village platted. Population 100.
1832 The Black Hawk War, which brought General Scott and cholera. Two steamers arrive that year. This is considerd the beginning of commerce, though a few schooners had called earlier.
1833 A large yacht entered the river, hauled over the bar by several yoke of oxen. The same year the government commenced harbor work.
1848 The first locomotive at Chicago arrived for the Galena and Chicago R.R., in the brig "Buffalo" from Buffalo, N.Y.

Cedar River, Wisconsin.

An abandoned lumber port which was destroyed by fire and never rebuilt. Has very interesting history. Now a populat fishing resort.

Escanaba, Wisconsin. (Originally know as Sand Point)

1852 First cabin built there and the only one until 1863.
1865 The Chicago and Northwestern R.R. completed its line from Negaunee. Ore dock No.1 was ready for use and this became a great shipping point soon afterwards.

Michigan City, Indiana.
1831 Isaac Elston platted the town.
1836 Federal work begun on harbor. The same year 1500 bushels of wheet were shipped out on the Str. Post Boy. Huge shipments followed, some of it coming from as far away as central Indiana.

Milwaukee, Wisconsin.
1679 Father Membrau passed through or near the site. It is said that Father Marquette had already visited the spot.
1757 There was a trading post. After the War of 1812 James Kinzie was sent there to represent the American Fur Company.
1 800 Town consisted of about a dozen houses.
1818 Solomon Juneau became first permanent settler.
1833 First Anglo Saxon settler.
1843 First Federal funds appropriated for harbor.

Manitowoc, Wisconsin.
1831 First permanent settler at mouth of Manitowoc River. Water in entrance 4 feet.
1852 First Federal funds appropriated for harbor.

Mainette and Menominee, Wisconsin-Michigan boundary.
1796 American Fur Company post established.
1832 First sawmill erected.
1836 Steamboat "New York", first to call at port.
1869 Goodrich Line steamers making regular calls.
1871 Chicago Northwester R.R. tracks laid between there and Green Bay.
1891 Govenrment takes over harbor work.

Manistique, Michigan.
Harbor developed by the Chicago Lumber Company with hardly any help from Federal Govt.
1881 Populations600.

Oconto, Wisconsin.
1836 Settlement begins. Sawmill erected. River only 3 feet deep at entrance.
1881 Government takes over harbor work.

Pensaukee, Wisconsin. (At mouth of Pensaukee River.)
1829 Sawmill erected two miles up the river. Only local effort at improving harbor until
1883 when Government took over the project. This port probably depended upon lumber alone. No ships reported as calling there in 1894-95-96-97.

Port Washington, Wisconsin.
1835 First settled around mouth of Sauk River.
1869 Harbor improvement planned.
1870 Government began harbor improvements.

Petoskey, Michigan.
No data at hand.

Pentwater, Michigan.
1867 Local funds used for harbor improvement. A depth of 4 feet attained.

Racine, Wisconsin. (At mouth of Root River)
1834 First permanent settlement by Gilbert Knapp who traveled to the place overland.
1835 first vessel, from Chicago, arrives with provisions. No harbor. Cargo lightered in from open lake.

Frankfort, Michigan.
1859 saw the beginnings of activity here.

Green Bay, Wisconsin.
This port has had a varied history and a long one.
1639 Visited by Jean Nicollet the French explorer.
1669 Father Allouez founded a mission and French trading posts followed. The place was abandoned from time to time for various reasons.
1745 Augustine De Langdole's trading post became the first permanent settlement.
1761 British took the place but left two years later during the Pontiac troubles.
1815 an American trading post established.
The original entrance to the Fox River afforded 11 feet of water, but the channel was too tortuous for ships.
1886 the U.S. Government began harbor improvements.

Grand River, Michigan.
This was the original entrance name for the entrance to Grand Haven.

HOLLAND, Michigan.
1825 American Fur Company trading post established.
1835 First dock built. Became a major entry port for settlers.
1867 Town incorporated.
U.S. takes over harbor work.

Holland, Michigan.
1847 Settlers from the Netherlands improve entrance and get a depth of 5 feet. Revetments repeatedly destroyed by storms.
1852 Government begins harbor improvements.

Kenosha, Wisconsin. (Once known as Southport)
1835 First settlement at mouth of Pike Creek, which afforded no harbor because of shallow entrance.
1836 The 100-ton Martin Van Buren, first vessel to stop at the place.
1844 Government funds appropriated for harbor work.

Kewaunee, Wisconsin.
1836 Wild land speculation brought settlers but a financial panic reduced the population to one family. Recovery was slow.
1843 A cargo of lumber was shipped out from the open beach.
1851 A pier was built out into the Lake and for 30 years local effort only was applied to the port.
1881 Federal funds appropriated for harbor.

Ludington, Michigan. (Once called Pere Marquette)
1867 Incorporated in this year.

Mackinaw City, Michigan.
1714 The French built a fort here.

Manistee, Michigan.
1846 First permanent settlement.

Muskegon, Michigan.
1812 Jean Baptiste Recollect's trading post.
1839 Land opened to settlers.
1849 Village platted.
1863 Local effort on harbor which in its natural state had only 6 feet at entrance.
1869 Incorporated as a city.
(There was a sawmill here as early as 1837)

MURAL FOR MARINERS' CHURCH

The views shown here are preliminary sketches for a ribbon mural which will soon be installed in Mariners' Church in Detroit's civic center.

Two feet high and sixty-four feet long, this work is intended to explain why the various types of Great Lakes vessels came into being, had their day, then passed out. About two dozen vignettes, each showing the activity ashore which made a given type of vessel desireable. Begining with a lone Indian in a birch-bark canoe and is followed by explorers, a primative bark mission, a lone trader, fur company agents, a trading post, and French habitants, all of whom depended upon the bark canoe.

That series is followed by village, pioneer log cabin, farm, etc., to indicate circumstances which made the early sailing vessels necessary. Then the hardships of overland travel are shown in four views to show why steamboats were financially successful from their first appearance on these waters. The saw mill scene tells of the beginnings of lumber, as a major cargo. An early harvesting machine indicates the beginning of large shipments of grain. The evolution of modern industry from the individual effort of craftsmen to giant corporations demanding countless millions of tons of iron ore are shown in vignettes of blacksmith shop, grindstone making by hand, an early iron mine, an open hearth steel mill, and an industrial scene on the Rouge River. Since vast increase in grain production came along with iron and contributed to the demand for modern bulk carriers a modern grain elevator is included in the last series.

The mural has been produced by taking small sketches which have been accepted as authentic and by the use of the opaque projector enlarging them to the desired size, then painting them directly into the mural.

Where no sketch could be found to convey the right idea one was made to suit the case.